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ABSTRACT

This guide presents low tech solutions that have worked for some people with disabilities or their parents. Twenty-one ideas are offered to give children with physical disabilities more opportunities for play and art. Examples include recycling stuffed animals into puppets, punching a hole in top of playing cards to accommodate a mouth stick, and sewing velcro onto stretchy gloves and onto small toys to help little hands grasp them. Suggestions on using computers include placing keyboards and monitors in nontraditional, more accessible locations; highlighting keyboard keys with stickers; and creating more mouse drag for better cursor control. In the area of communication and academics, several specific suggestions are offered for making communication cards and boards. In working around the house, helpful techniques include using a vinyl jar opener to grip knobs, hooking a large loop of belting through a refrigerator handle so it can be opened using an arm rather than a hand, and angling a mirror over cooktops to permit seated cooks to see into pans. Several miscellaneous tips are also offered. (JDD)

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LOW TECH SOLUTIONS--
A PLACE TO BEGIN

No. 72

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This paper is a compilation of low tech solutions that have worked for some people with disabilities and/ or their parents. These ideas have come from folks all over the country. It should be kept in mind that low tech solutions, just like high tech solutions are a matter of individual preference and practicality. There is no "one size fits all." These suggestions are offered as a place to begin, not a final solution or a cure-all.

– Low Tech Solutions compiled by Tech-Able, Inc.

A. PLAY & ARTS AND CRAFTS - Most of these ideas are to give children with physical disabilities more opportunities for play and art.

1- Finger painting -- a roller paint tray, cookie sheet, or baking pan can be used to confine work area (and mess)
-- magnets can hold paper in place
-- freezer paper is a less expensive alternative to finger paint paper
--homemade finger paints (mix over low heat, 3 tbs. sugar & 1/2 c. cornstarch, add 2 c. cold water stirring until thick, divide mixture into medium size cupcake tins, add a drop or two of food coloring or tempera and allow to cool, mixture can be stored in refrigerator between uses.)

2- Enclose a hair styling gel , such as " dippity do" ™, in a zip lock bag. Use finger or stylus (NO SHARP POINTS) to draw designs over and over. Letters and numbers can be practiced.

3- Use a spring type clothes pin to hold sponge pieces for painting. (a strip of velcro can hold clothes pin to hand if needed.

4- Collections of leaves or other out door "finds," small toys or trinkets can be made into a collage by allowing child to arrange them (or indicate placement for a peer to arrange on a sheet of blueprint paper purchased from an office supply store. Then expose the masterpiece to the sun. (Brightly colored construction paper can be used as a less expensive alternative, but allow more time for exposure to the sun.

5- For an art project that all can do - spread watered down glue on paper with paint brush or sponge. Use colored strips of tissue paper for design. The idea is to "crumble" the tissue and stick randomly on glued surface to make a unique design - a skill most every one can "excel" in.

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6- Play boards can be made from plastic, wood or tri-wall cardboard. Cut a square of appropriate size (10"-14") from one of the materials. Cut another piece 3" or 4" (depending on how much slant you want) and attach it to one side at a 90º angle to form a slanted work surface. Cover the surface with loop display fabric or strips of velcro. Attach velcro to one side of toys (such as a small doll and a feeding dish or a car and a gasoline pump.) Put a few holes around the board and attach with elastic such things as a wash cloth and a feeding spoon or a small paint brush and a buffing rag. Toys stay in place. Toys on elastic are more easily retrieved when dropped.

7- Sew strips of velcro on the thumb and across the palm of stretchy, one size fits all gloves. Add velcro to toys such as comb, baby bottle or a small mechanic to go with above play board. Toys will stick to velcro even when little hands cannot grasp or sustain a grasp.

8- Make play boxes so that little toys can't "get away" by cutting a piece of foam to fit inside the box, then cut circles in foam to create little wells for toys.

9- To keep battery toys from "wandering off" use a hula hoop or build a corral out of tri-wall cardboard.

*** an electric kitchen carving knife cuts foam smoothly and easily

10- Recycle stuffed animals into puppets. Open a seam and discard stuffing. Sew a child's tube sock inside the animal, the sock stays put to allow for better control with spastic arm movements.

Tiny stuffed animals can be sewn onto a small stretch sock to be worm on a fist or foot. Secure jingle bells inside for additional stimulation.

11- PVC PIPE crayon holder. Slip large size crayon through the "T" of a PVC "T" joint for 1/2 " PVC pipe. Cut a piece of 1/2 " PVC pipe to desired length as a handle. Put cap on the end.

12- Double sided sticky tape can be used as a temporary measure around the top of game pieces to make them easier to pick up.

13- Tacky Tack ™(name varies according to brand) can be used to hold game pieces on game board when on a slant. (This is a reusable substitute for thumb tacks which can be purchased in the stationary department of stores like Target, K-mart and Walmart.)

14- The commercially available spin art games can be used with a battery interrupter and a switch.

15- The spin art can also be used as a game spinner by placing a colored or numbered overlay on the bottom of turn table. Cut a pointer out of paper or

cardboard and attach to the upper outside edge with tacky tack. To use to spin dice, glue a popsicle stick to a round piece of cardboard and put on turn table. A momentary switch can be used to spin or roll.

16- Punch a hole in top of playing cards to accommodate a mouth stick.

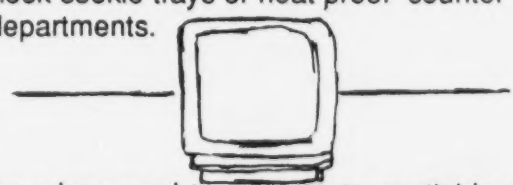
17- Cut a rectangle of foam, use an electric knife to make a slit across the top to use as card holder.

18- Permanently attach, or temporarily attach with velcro, a round piece of plexiglass on top of push and go toys to give a larger surface for activating the toy.

19- Enlarge the knob on a Jack-in-the-Box using wood or plexiglass; carve out finger grooves from a two inch circle and attach in place of original tiny knob.

20- Magnets are always fun. The handle (packaged with little chips) sold with Bingo supplies are easy to hold and can be velcroed to a little hand.

21- Cut small pieces of adhesive backed magnet stips on parquet or other small block. They will hold on any metal surface for creating designs or other art or counting for math. Don't over look cookie trays or heat proof counter protection pads sold in kitchen departments.



B. AT THE COMPUTER-

1- Disengaging the repeat and using a keyguard (commercially available out of plexiglass, or home made out of wood or cardboard are some options) are two very common, effective ways to allow for better computer access.

2- Look beyond traditional monitor placements - eye level, even on the floor for young children.

3 - Put monitor facing up in a cube chair when using a touch screen with a child who can not reach up.

4 - Make an overlay to match the screen and put it on a table top under the touch window for children who cannot reach up or to make the transition from "touching the window" to causing something to happen on the screen from a longer distance away.

5- Place keyboards, regular or adaptive, on an easel or slant board. These can be made out of plastic, wood or tri-wall cardboard.

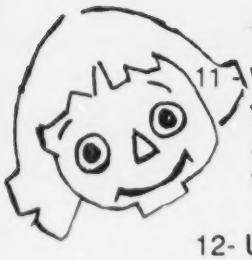
6 - Use velcro to keep hardware stable.

7 - Darken portions of the room to increase visual access to the monitor.

8 - Enlarge/highlight keys of keyboard with stickers. (Stickers are available in office supply stores and stationary sections of department or grocery stores.)

9 - Color code needed keys for programs using pieces cut from moisture guards. Moisture guards can some times be found in office supply stores that sell computer supplies or from computer mail catalogs.

10 - Construct cardboard keyguards to highlight keys required for a particular program and cover other keys that may serve as distractions.



11 - When using mouse: place monitor at eye level with CPU off to the side. Put the mouse right in front of monitor to minimize distance between mouse and monitor as much as possible. User can move mouse and see results while looking directly at the monitor.

12- Use adjustable tables to find best height for hardware.

13- Use pillows, stools, anything to stabilize dangling feet.

14 - Velcro a switch to table directly in front of monitor to stabilize switch and to decrease the desire to play with or move the switch around.

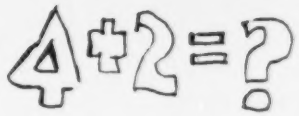
15- Use real objects or toys to accompany graphics on the screen to provide concrete representation of what is on the screen and encourage additional communication.

16 - Find matching colorforms for computer programs for additional reinforcement, they will stick to the screen without causing damage. (e.g. Sesame Street Characters, Snoopys, clothes from Raggedy Ann, foods, shapes.) {Reusable lift and place stickers will also work}

17- Turn mouse pad over for a slower surface to create more drag for better curser control.

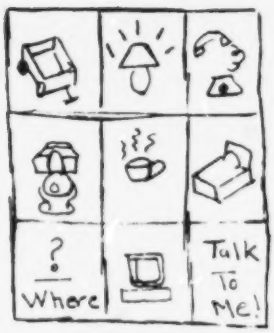
18- Sticky back felt can be positioned in well of Trackball to create more drag for better curser control.

C. COMMUNICATION AND ACADEMICS



1- Communication cards are easy to make. Use any size picture or icon. Reduce or enlarge on copy machine as needed. Glue to poster board slightly larger than picture. Cover with clear contact paper.

options-



- use photographs
- cut pictures from toy boxes, food boxes, advertisements, catalogs
- add hook velcro to the back for use with communication aprons, dial or clock scanners, indoor/outdoor carpet, any convenient surface with smooth velcro
- color code your poster board or draw a square around picture to give idea syntax (e.g. all nouns-yellow, all verbs-pink, all prepositions-green, all descriptors-blue, misc.{un, not, my turn} orange)

2- Pages for baseball card collections make perfect pockets for communication cards & symbols, these can be kept in a loose leaf , individual pages can be displayed on an easel or some other mount (these can be purchased in hobby shops and variety department stores)

3- Storage pages for slides work well for smaller size communication cards.

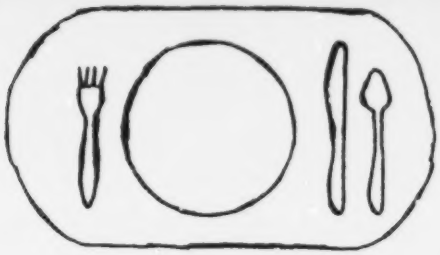
4- A "chip bag" clip (purchased in grocery stores) works well to fasten page to easel

5- A square of cloth with strings tied around the waist can be used as a lap scarf. Attach velcro to Augmentative/Alternative devices or communication boards and to lap scarf. Use when a wheel chair tray is not appropriate (e.g. when bowling.)

6- Make a story board by putting pictures on squares of Masonite ™ approximately 4 inches big. Make a base of desired length with one or two slots across the length to accommodate squares. Use when teaching sequencing or using spelling words in sentences. Put individual letters on square and use for spelling practice. Use to alphabetize words.

7- As a variation of above, put words, letters or pictures on cards with holes. Use a peg with hooks or small dowels to organize cards.

D. MISCELLANEOUS



1- Scarfs (square bandanas) (available in clothing departments, craft shop convenience store and western stores) are more "fashionable" than bibs to catch drool for older children (sport wrist bands can serve the same purpose.)

2- For multisensory experience connect both a cassette player or radio with a sound activated light globe. Activate both simultaneously with a single switch.

3- Some cassette players have a small jack that says remote or mic. An adapter from Radio Shack that brings a miniature plug to a sub-miniature plug will allow direct access for a switch.

4- Make a can or cup holder by attaching suction cups to the bottom of a plastic food storage box or ready made frosting can. Foam may be used to create a snug fit.

5- To help with organizational skill such as table setting, buy solid colored vinyl placemats on sale, use permanent marker to draw silhouettes of dishes and utensils.

6- Dycem is a tacky substance that can be used in a variety of situations to keep things from slipping. (e.g. under toys, under small items that are difficult to grasp, small appliances like can openers) Dycem can also be used under paper to keep it from shifting. Dycem can be purchased through catalog companies handling medical and therapy supplies (e.g. Fred Sammons, Ableware, etc.) This is an expensive item.

A less expensive alternative is "slip not." ™ It can be purchased from dealers of recreational vehicles (campers, mobile homes, etc) at a fraction of the cost of dycem. One draw back is that this has a bumpy surface. While this may be a plus for picking up smooth things, such as cards or puzzle pieces it can not be used under a paper for drawing or writing.

E. AROUND THE HOUSE

1- Use a metal potato masher to turn knobs such as those on an oven or washing machine.

2- Use a vinyl jar opener to grip knobs

3- Slide a wooden clothes pin over fin-type knobs for easier turning.

4- Angle a mirror over range or cooktops to permit a seated cook to see into pans.

5- Washing small items such as socks or handkerchiefs in a mesh laundry bag makes removal from a washer or dryer easier. If needed, tongs or gripper can be used to remove laundry bag.

6- Use pull out shelfs or under shelf hanging baskets to make things more accessible in closets or refrigerators.

7- Placing electrical tape across the bottom gasket on a refrigerator door in one or two places will make the door easier to open for those with limited strength (this may reduce energy efficiency sightly.)

8- Hook a large loop of fabric or belting through a refrigerator handle. It can pull the door open using an arm rather than a hand.

9- Use a plastic label maker to mark appliance controls for a visually impaired family member.

10- Glue or nail 2 thin wood strips at corner of cutting board to help hold slices of bread or other items.

11- Drill 2 holes and hammer in sharp stainless steel nails to hold potatoes or other vegetables for peeling or slicing.

12- Attach suction cups to bottom of cutting board with tee nuts to stabilize cutting board.

13- A drawer pull, fastened vertically near the hinged side of the door can assist a chair user in pulling the door closed.

14- Small castors under cutting boards can assist in moving pots or dishes that are difficult to lift. Round ones with a long handle are ideal for handling hot pans.

These low tech solutions have been compiled by Tech-Able, Inc. an Alliance for Technology Access Center in Conyers, GA. Many of the ideas have come from people associated with the Alliance for Technology Access Centers across the country.

The Alliance for Technology Access (ATA) is a growing network of computer resource centers and technology vendors across the country. Begun in 1987 as a joint effort of Apple Computer Inc. and the Disabled Children's Computer Group, the Alliance demonstrates the power of collaboration as a catalyst for meaningful and lasting change.("Perspectives,"Volume 1)

Since 1988, the Living and Learning Resource Centre has been an active member of the ATA, and represents PIAM/PAM/LLRC on a national level. Our activities have included mutual problem-solving with other centers, sharing of ideas and resources, technical assistance, and participation in ATA training sessions. Bob Hill, Sensory Technologist at the LLRC, was eleceted to the Alliance Planning Team in January, 1991. His duties include representing the consumer viewpoint to the Alliance Board of Directors and staff.

Lynn Chiu, the author of "Low Tech Solutions--Something to Try", describes herself as "the parent of Sandy, a nine year old girl with Cerebral Palsy. In looking for solutions for her, I fill my head with technology knowledge that spillls out and is shared with others." Lynn is director of TechAble, the ATA center in Conyers, Georgia.

Also, our thanks to LLRC's own Sue Burns for the light-hearted art work in this REPEATER!

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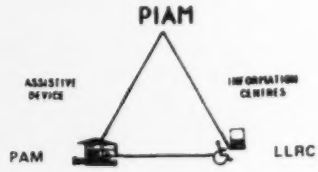

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